



-1-

SEQUENCE LISTING

<110> Fikes, John D.
Sette, Alessandro
Sidney, John
Southwood, Scott
Celis, Esteban
Keogh, Elissa A.
Chesnut, Robert

<120> HLA Class I A2 Tumor Associated Antigen
Peptides and Vaccine Compositions

<130> 2060.0150002

<140> US 09/583,200
<141> 2000-05-30

<150> US 09/016,361
<151> 1998-01-30

<150> US 60/036,696
<151> 1997-01-31

<160> 57

<170> PatentIn version 3:1

<210> 1
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CEA.233V10

<400> 1
Val Leu Tyr Gly Pro Asp Ala Pro Thr Val
1 5 10

<210> 2
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CEA.605V9

<400> 2
Tyr Leu Ser Gly Ala Asn Leu Asn Val
1 5

<210> 3
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CEA.687

<400> 3
Ala Thr Val Gly Ile Met Ile Gly Val
1 5

<210> 4
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> p53.25V11

<400> 4
Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Val
1 5 10

<210> 5
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> p53.139L2

<400> 5
Lys Leu Cys Pro Val Gln Leu Trp Val
1 5

<210> 6
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> p53.139L2B3

<400> 6
Lys Leu Asx Pro Val Gln Leu Trp Val
1 5

<210> 7
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> p53.149L2

<400> 7
Ser Leu Pro Pro Pro Gly Thr Arg Val
1 5

<210> 8
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> p53.149M2

<400> 8
Ser Met Pro Pro Pro Gly Thr Arg Val
1 5

<210> 9
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

<223> Her2/neu.369L2V9

<400> 9

Lys Leu Phe Gly Ser Leu Ala Phe Val
1 5

<210> 10

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Her2/neu.369V2V9

<400> 10

Lys Val Phe Gly Ser Leu Ala Phe Val
1 5

<210> 11

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Her2/neu.773

<400> 11

Val Met Ala Gly Val Gly Ser Pro Tyr Val
1 5 10

<210> 12

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Her2/neu.5

<400> 12

Ala Leu Cys Arg Trp Gly Leu Leu Leu
1 5

<210> 13

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> MAGE3.271

<400> 13

Phe Leu Trp Gly Pro Arg Ala Leu Val
1 5

<210> 14

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Her2/neu.48

<400> 14

His Leu Tyr Gln Gly Cys Gln Val Val
1 5

<210> 15
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Her2/neu.435

<400> 15
Ile Leu His Asn Gly Ala Tyr Ser Leu
1 5

<210> 16
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CEA.691

<400> 16
Ile Met Ile Gly Val Leu Val Gly Val
1 5

<210> 17
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Her2/neu.369

<400> 17
Lys Ile Phe Gly Ser Leu Ala Phe Leu
1 5

<210> 18
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> MAGE3.112

<400> 18
Lys Val Ala Glu Leu Val His Phe Leu
1 5

<210> 19
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CEA.24V9

<400> 19
Leu Leu Thr Phe Trp Asn Pro Pro Val
1 5

<210> 20
<211> 10
<212> PRT

<213> Artificial Sequence

<220>

<223> MAGE3.160

<400> 20

Leu Val Phe Gly Ile Glu Leu Met Glu Val
1 5 10

<210> 21

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> MAGE3.159

<400> 21

Gln Leu Val Phe Gly Ile Glu Leu Met Glu Val
1 5 10

<210> 22

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Her2/neu.689

<400> 22

Arg Leu Leu Gln Glu Thr Glu Leu Val
1 5

<210> 23

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Her2/neu.665

<400> 23

Val Val Leu Gly Val Val Phe Gly Ile
1 5

<210> 24

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> MAGE2.157

<400> 24

Tyr Leu Gln Leu Val Phe Gly Ile Glu Val
1 5 10

<210> 25

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Her2/neu.952

<400> 25
Tyr Met Ile Met Val Lys Cys Trp Met Ile
1 5 10

<210> 26
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> tetanus toxoid positions 830-843, standard peptide 553.01

<400> 26
Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10

<210> 27
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Plasmodium falciparum CS protein positions 378-398

<400> 27
Asp Ile Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe
1 5 10 15
Asn Val Val Asn Ser
20

<210> 28
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Streptococcus 18kD protein position 116

<400> 28
Gly Ala Val Asp Ser Ile Leu Gly Gly Val Ala Thr Tyr Gly Ala Ala
1 5 10 15

<210> 29
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> pan-DR binding epitope peptide

<220>
<221> MOD_RES
<222> (3)...(3)
<223> Xaa = cyclohexylalanine, Phe or Tyr

<220>
<221> MOD_RES
<222> (7)...(7)
<223> Xaa = Trp, Tyr, His or Asn

<400> 29
Ala Lys Xaa Val Ala Ala Xaa Thr Leu Lys Ala Ala Ala
1 5 10

<210> 30

<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<220>
<221> MOD_RES
<222> (3)...(3)
<223> Xaa = cyclohexylalanine

<400> 30
Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 31
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<400> 31
Ala Lys Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 32
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<400> 32
Ala Lys Tyr Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 33
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<400> 33
Ala Lys Phe Val Ala Ala Tyr Thr Leu Lys Ala Ala Ala
1 5 10

<210> 34
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<220>
<221> MOD_RES
<222> (3)...(3)
<223> Xaa = cyclohexylalanine

<400> 34
Ala Lys Xaa Val Ala Ala Tyr Thr Leu Lys Ala Ala Ala
1 5 10

<210> 35
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<400> 35
Ala Lys Tyr Val Ala Ala Tyr Thr Leu Lys Ala Ala Ala
1 5 10

<210> 36
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<400> 36
Ala Lys Phe Val Ala Ala His Thr Leu Lys Ala Ala Ala
1 5 10

<210> 37
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<220>
<221> MOD_RES
<222> (3)...(3)
<223> Xaa = cyclohexylalanine

<400> 37
Ala Lys Xaa Val Ala Ala His Thr Leu Lys Ala Ala Ala
1 5 10

<210> 38
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<400> 38
Ala Lys Tyr Val Ala Ala His Thr Leu Lys Ala Ala Ala
1 5 10

<210> 39
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> alternative preferred PADRE peptide

<400> 39

Ala Lys Phe Val Ala Ala Asn Thr Leu Lys Ala Ala Ala
1 5 10

<210> 40

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> alternative preferred PADRE peptide

<220>

<221> MOD_RES

<222> (3)...(3)

<223> Xaa = cyclohexylalanine

<400> 40

Ala Lys Xaa Val Ala Ala Asn Thr Leu Lys Ala Ala Ala
1 5 10

<210> 41

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> alternative preferred PADRE peptide

<400> 41

Ala Lys Tyr Val Ala Ala Asn Thr Leu Lys Ala Ala Ala
1 5 10

<210> 42

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> standard peptide 944.02

<400> 42

Tyr Leu Glu Pro Ala Ile Ala Lys Tyr
1 5

<210> 43

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> standard peptide 941.01

<400> 43

Phe Leu Pro Ser Asp Tyr Phe Pro Ser Val
1 5 10

<210> 44

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> standard peptide 1072.34

<400> 44
Tyr Val Ile Lys Val Ser Ala Arg Val
1 5

<210> 45
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 941.12

<400> 45
Lys Val Phe Pro Tyr Ala Leu Ile Asn Lys
1 5 10

<210> 46
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 940.06

<400> 46
Ala Val Asp Leu Tyr His Phe Leu Lys
1 5

<210> 47
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 1083.02

<400> 47
Ser Thr Leu Pro Glu Thr Tyr Val Val Arg Arg
1 5 10

<210> 48
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 979.02

<400> 48
Ala Tyr Ile Asp Asn Tyr Asn Lys Phe
1 5

<210> 49
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 1075.23

<400> 49
Ala Pro Arg Thr Leu Val Tyr Leu Leu
1 5

<210> 50

<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 1021.05

<400> 50
Phe Pro Phe Lys Tyr Ala Ala Ala Phe
1 5

<210> 51
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 515.01

<400> 51
Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
1 5 10

<210> 52
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 829.02

<400> 52
Tyr Lys Thr Ile Ala Phe Asp Glu Glu Ala Arg Arg
1 5 10

<210> 53
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 717.01

<400> 53
Tyr Ala Arg Phe Gln Ser Gln Thr Thr Leu Lys Gln Lys Thr
1 5 10

<210> 54
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 1200.05

<400> 54
Glu Ala Leu Ile His Gln Leu Lys Ile Asn Pro Tyr Val Leu Ser
1 5 10 15

<210> 55
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> standard peptide 650.22

<400> 55
Gln Tyr Ile Lys Ala Asn Ala Lys Phe Ile Gly Ile Thr Glu
1 5 10

<210> 56
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> DR7 preferred motif

<220>
<221> VARIANT
<222> (1)..(1)
<223> Met, Phe, Leu, Ile, Val, Trp, or Tyr

<220>
<221> VARIANT
<222> (5)..(5)
<223> May be any amino acid

<220>
<221> VARIANT
<222> (6)..(6)
<223> Ile, Val, Met, Ser, Ala, Cys, Thr, Pro, or Leu

<220>
<221> VARIANT
<222> (8)..(8)
<223> May be any amino acid

<220>
<221> VARIANT
<222> (9)..(9)
<223> Ile or Val

<400> 56
Xaa Met Trp Ala Xaa Xaa Met Xaa Xaa
1 5

<210> 57
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> DR7 deleterious motif

<220>
<221> VARIANT
<222> (1)..(1)
<223> May be any amino acid

<220>
<221> VARIANT
<222> (3)..(3)
<223> May be any amino acid

<220>
<221> VARIANT
<222> (5)..(6)

<223> May be any amino acid

<220>

<221> VARIANT

<222> (7)..(7)

<223> Gly, Arg, or Asp

<400> 57

Xaa Cys Xaa Gly Xaa Xaa Xaa Asn Gly

1

5